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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Minkow, et al.) Group Art Unit 3636
Appl. No. : 09/878,719)
Filed : June 11, 2001)
For : BICYCLE SADDLE WITH CUTOUT)
Examiner : Barfield, A.)

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ON APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

REPLY BRIEF

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GROUP 3600

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Dear Sir:

In reply to the Examiner's Answer, mailed on May 6, 2003 as Paper #20 in the above-captioned patent application, Appellant submits the following Reply Brief. Claims 25 and 26 remain pending in the application, a copy of which are attached hereto as Appendix A.

The following remarks directed at specific Sections contained in the Examiner's Answer will be identified by a corresponding heading. This Reply Brief is being filed in triplicate. Please charge any additional fees which may be required to Deposit Account No. 11-1410.

I. REMARKS IN RESPONSE TO EXAMINER'S ANSWER

A. Section 2 Related Appeals and Interferences

The Examiner's Answer, at Section 2, states that "[t]he brief does not contain a statement identifying the related appeals and interferences." To the contrary, the brief, in Section 2 on page 2 clearly states that there are no known interferences that will directly affect the Board's decision in the pending appeal.

B. Section 6 Issues

The Examiner's Answer, at Section 6, states that "[t]he appellant's statement of the issues in the brief is substantially correct. The changes are as follows: C. Whether claim 26 is properly rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson."

To the contrary, Appellant's statement of the issues contained in the brief correctly states the issue as presented in the Final Office Action, mailed on June 4, 2002. According to the Final Office Action, claim 26 was rejected under 35 U.S.C. 103(a) "as being unpatentable over Wheeler in view of Henderson."

In addition, the Examiner's Answer, at Section 6, states that the proper issue is "[w]hether claim 26 is properly rejected under 35 U.S.C. 103(a) as being unpatentable over Plus Advertisement.

Likewise, Appellant's statement of the issues contained in the brief correctly states the issue as presented in the Final Office Action, which asserts "Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Plus."

C. Section 7 Grouping of Claims

The Examiner's Answer, at Section 7, states that "[t]he rejection of claims 25 and 26 stand or fall together because Appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof." Appellant disagrees with the

Examiner's conclusion and the rationale used to reach it. Specifically, 37 CFR 1.192(c)(7) states that "[f]or each ground of rejection which appellant contests *and which applies to a group of two or more claims*, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together, and in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable," (emphasis added). Therefore, in order for a group of claims to stand or fall together, they must be grouped under a single ground of rejection. The pending claims do not meet this prerequisite.

There are two pending claims. Each claim is independent and has been rejected separately under distinct grounds of rejection. Specifically, Claim 25 stands rejected under 35 U.S.C. 102(b) as anticipated by Henderson, and also under 35 U.S.C. 102(b) as anticipated by Plus. Claim 26 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Henderson, and also under 35 U.S.C. 103(a) as being unpatentable over Wheeler in view of Plus.

Therefore, the claims are not grouped under a single ground of rejection. In fact, not only are different references used to reject each claim, the claims are not even rejected under a common statute. Consequently, even in the absence of an explicit statement by appellant that the claims do not stand or fall together, according to 37 CFR 1.192(c)(7), the claims do not stand or fall together and a statement and reasoning in support thereof is not required.

II. RESPONSE TO EXAMINER'S ARGUMENT

A. Henderson does not teach a frame defining a first support surface at said front end of saddle... generally widening from front to back.

The Examiner argues that Henderson shows a frame bent from wire "which forms a support surface (the top surface of the bent wire), which extends 'perimetrically' from a first outer side continuously to a second outer side and 'generally' widens from a front to back."

However, the claim requires a “first support surface at said front end of saddle... generally widening from front to back.” According to the claim language, the frame defines “a front end, a back end, ... a first outer side and a second outer side.” The frame further defines “a first support surface... [that is] generally widening from front to back.” Notably, the frame defines a *front end and a back end*, while the support surface widens from *front to back*. Hence, the usage of the terms “front end” and “back end” refer to the frame, while the terms “front” and “back” are used to refer to the support surface. Therefore, the claim requires the *first support surface* to generally widen from *front to back* at the front end of the saddle. However, since the support surface extends from the first outer side to the second outer side (of the frame), then the frame also widens from front to back at the front end of the saddle.

In Appellant’s Appeal brief, Appellant sought to distinguish Henderson by distinguishing the frame. While it may be argued that the frame of Henderson generally widens from front to back at the front end of the saddle, Henderson does not teach a frame defining a support surface which widens from front to back at the front end of the frame.

To the extent that a round cross-sectioned wire can be considered to provide a surface, the surface provided by the wire of Henderson does not “generally widen from front to back.” To the contrary, the wire of Henderson has a round cross section as seen in Figures 5 and 6, which apparently maintains a fairly constant cross-section as it defines the perimeter of the frame. Therefore, Henderson does not anticipate the invention of Claim 25. Furthermore, Henderson does not provide at least this teaching to support an obviousness rejection of Claim 26.

B. The grooves of Henderson and Plus are not of sufficient size to relieve pressure on the pudendal arteries.

It is the Examiner's position that "the grooves as shown by both Henderson and the Plus are of sufficient size to inherently provide 'an open space for relieving pressure on the pudendal arteries' of a particular user depending on the size of the user's genital region."

Appellant maintains the argument that the grooves shown by both Henderson and the Plus are not sufficiently sized to provide the claimed benefits of Claim 25. There is no evidence to support the Examiner's assertion that the Henderson and Plus grooves are sufficiently sized to relieve pressure on the pudendal arteries, nor does Henderson or Plus provide a groove that is approximately one inch wide at a location midway between the front end and the back end of the frame, as recited in Claim 26.

Male infertility has only recently been linked to bicycle saddles. As such, Henderson, which issued in 1897, had no motivation to provide a saddle to meet this need. While early bicycle saddles attempted to relieve pressure on a rider's perineum and/or tailbone (*See Wheeler*), a different structure is required to relieve pressure on a rider's pudendal arteries.

The saddle of Claim 25 is specifically configured to alleviate erectile dysfunction by relieving pressure on a rider's pudendal arteries. Based upon the medical research conducted by Dr. Minkow, he states in his declaration that the saddle of Henderson provides a groove that is "too narrow to be therapeutically effective with regard erectile dysfunction." He further states that "to be effective in preventing erectile dysfunction in an adult male, this cutout or groove must be of sufficient size to underlie and relieve pressure on the pudendal arteries of a seat occupant." Henderson provides a groove that is apparently only about one-half inch wide at a location midway between the front end and the back end of the frame, and therefore, does not provide a saddle that relieves pressure on the pudendal arteries as required by Claim 25.

Likewise, the Plus saddle does not relieve pressure on the pudendal arteries as recited in Claim 25. In his declaration, Dr. Minkow states the Plus saddle likewise has a central groove that is “far too narrow and too shallow to provide the benefits” of the claimed saddle. Thus, the Plus saddle does not relieve pressure on the pudendal arteries and therefore does not anticipate Claim 25.

The Examiner, in the Examiner’s Answer, further states that “a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.” Appellant submits that this recitation of intended use *does* result in a structural difference that patentably distinguishes the claimed invention from the prior art. According to M.P.E.P. § 2173.05(g), “[a] functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.” One of ordinary skill in the art will recognize that in order to “relieve pressure on the pudendal arteries,” the saddle must have a particular configuration and structure that redistributes a rider’s weight away from the areas surrounding the pudendal arteries. Specifically, in order to relieve pressure on the pudendal arteries, a seat must alleviate pressure on the areas underlying and immediately adjacent to the pudendal arteries. In the claimed embodiments, this is accomplished by providing a groove having sufficient dimensions to redistribute the weight of the seat occupant from areas underlying and immediately adjacent the pudendal arteries to the ischial tuberosities.

According to the specification, at page 6, lines 6-9, the typical distance between the ischial tuberosities of an adult varies between approximately 2” to about 4 ½”. Accordingly, the groove is specifically configured to support the ischial tuberosities, yet provide space underneath

the pelvis along the length of the pudendal arteries. The prior art saddles do not provide this claimed benefit.

As stated in the Declaration by Dr. Roger Minkow, “[t]o be effective in preventing erectile dysfunction in an adult male, this cutout and/or groove must be of sufficient size to underlie and relieve pressure on the pudendal arteries of a seat occupant. More specifically, the cutout and/or groove must be of sufficient width at the appropriate location, such as about one inch wide at a location that is midway between the front end and the back end of the saddle, to provide an effective therapeutic solution.” None of the prior art saddles meet the limitations of the pending claims, either alone or in combination.

In addition, modifying the Henderson or Plus saddles to provide the beneficial configuration of Claim 26 is not obvious. Not only must a groove in the saddle be provided, but the groove must alleviate pressure in anatomically correct areas adjacent and underlying the pudendal arteries while redistributing the rider’s weight to the ischial tuberosities. Therefore, the groove must have at least a minimum width and depth at the appropriate locations to adequately relieve pressure in the necessary areas. The saddle of Claim 26 recites that the groove is “approximately one inch wide at a location midway between said front end and said back end of said frame.” The structure recited in Claim 26 provides the necessary pressure relief and weight distribution. Neither the Henderson nor the Plus saddles provide a groove suitably configured to meet these limitations.

In addition, neither the Henderson or Plus saddles teach any motivation for increasing the size of their grooves to meet the claimed limitation. Accordingly, the claimed saddle of Claim 26 is not obvious in view of Henderson or Plus, either alone or in combination.

C. Henderson does not show the use of a groove approximately one inch wide at a location midway between the front end and back end of the frame.

In the final Office Action mailed June 4, 2002, the Examiner properly stated that Henderson does not show the use of a groove having an one inch width at a location midway between the front end and back end of the frame. The Examiner contends that the groove taught by Henderson meets the limitation of “approximately one inch width at a location midway between the front end and back end of the frame.” Appellant argues that one-half inch is not “approximately” one inch.

As stated in the declaration of Dr. Minkow at paragraph 6, Henderson teaches a groove that, “given the apparent scale of the drawing, appears to be approximately one-half inch wide at a location midway between the front end and the back end of the frame.” While the Henderson specification is silent as to the benefit of the groove, we can reasonably conclude that it provided some desired benefit. However, it is not an obvious design choice to rely on hindsight and *double* the size of the Henderson groove to arrive at the claimed invention.

Moreover, the Henderson patent issued in 1897, well before erectile dysfunction was linked to bicycle saddle use. Henderson had no motivation to configure her saddle as claimed in the absence of the desire to alleviate erectile dysfunction by specifically configuring her saddle with the necessary structure. Therefore, Henderson does not meet at least this limitation of the Claim 26 and there is no motivation to configure Henderson as such.

III. CONCLUSION

Nothing in the prior art discloses, teaches or suggests the invention recited by the claims discussed above. The Examiner maintains that obvious modifications to the cited art saddles result in the claimed invention. However, Appellant again points out that saddles have been manufactured since at least the mid 1800’s, yet not a single saddle has been made that meets the

limitations or provides the benefits of the claimed saddle. The final rejection of Claims 25 and 26 should therefore be reversed. Favorable action to this end therefore is most respectfully solicited.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR

Dated: July 7, 2003

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Appendix A

25. An ergonomic bicycle saddle, comprising:

a rigid frame defining a front end, a back end, a front half, a back half, a first outer side and a second outer side, said frame defining a first support surface at said front end of said saddle extending from said first outer side to said second outer side and generally widening from front to back;

a resilient padding layer disposed on top of said frame and having a front end, a back end, a front half, a back half, a first outer side and a second outer side, said padding layer being continuous from said first outer side to said second outer side at said front end of said padding layer, and defining an upper surface;

a central groove at least partially defined by inwardly facing sides of said resilient material which are beveled outward toward said upper surface, said groove extending to form a scrotum channel positioned roughly in the longitudinal center of said saddle, said groove having a leading edge defined by said resilient material, said groove narrowing as said groove extends toward said scrotum channel along a longitudinal axis from approximately said back end of said frame; and

said leading edge of said groove extending forward to about midway through said front half of said padding layer; and

wherein said groove provides an open space for relieving pressure on the pudendal arteries.

26. An ergonomic bicycle seat, comprising:

a rigid frame defining a front end, a back end, a front half, a back half, a first outer side and a second outer side, said frame defining a first support surface at said front end of said seat extending from said first outer side to said second outer side and generally widening from front to back;

a resilient padding layer disposed on top of said frame and having a front end, a back end, a front half, a back half, a first outer side and a second outer side, said padding layer being continuous from said first outer side to said second outer side at said front end of said padding layer, and defining an upper surface;

a central groove at least partially defined by inwardly facing sides of said resilient material which are beveled outward toward said upper surface, said groove extending to form a scrotum channel positioned roughly in the longitudinal center of said seat, said groove having a leading edge defined by said resilient material, said groove narrowing as said groove extends toward said scrotum channel along a longitudinal axis from approximately said back end of said frame; and

wherein said groove is approximately one inch wide at a location midway between said front end and said back end of said frame.

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